

in chinks and crevices, coming out at night in search of food. It is of a greyish-white colour, marked with spots and lines of brown.

The small black crickets, so plentiful in meadows and pastures, belong to the genus *Nemobius*. They may be distinguished from the species of *Gryllus* by their smaller size, duller colours, and by the thorax or neck, being slightly hairy. These little crickets do not burrow in the earth like the larger kinds, although an occasional specimen may be found under stones or clods of earth. They are of social habits, keeping together in large troops or swarms. The striped cricket, *Nemobius vittatus*, Harris, is our most abundant species; its colour is greyish-brown, marked with lines of black.

Another species of about the same size, but with long wings, may occasionally be found; this is the little long-winged cricket, *Nemobius fasciatus*, DeGeer. It closely resembles the striped cricket, but the wings are about twice the length of the body. It flies well, and sometimes enters houses in the evening, attracted by the light. "Where crickets abound, they do great injury to vegetation, eating the most tender parts of plants, and even devouring roots and fruits whenever they can get them. Melons, squashes, and even potatoes, are often eaten by them, and the quantity of grass that they destroy must be great, from the immense numbers of these insects which are sometimes seen in our meadows and fields."—(Harris.)

Domestic fowls and turkeys will eat crickets and locusts whenever they can get them, and would considerably lessen their numbers if let run in the fields after the crop has been harvested. The broad-winged hawk (*Buteo Pennsylvanicus*) also feeds largely upon them in the fall, as I have on several occasions found them in their crops, one individual having its crop literally crammed with specimens of the common field cricket, (*Gryllus neglectus*.)

Crickets might be easily killed by simply crushing them under foot in the fall, as at this time they congregate in numbers in exposed situations for the purpose of depositing their eggs; they might also be caught with nets by children and destroyed.

All the foregoing species live on the ground, but we have another kind of cricket which spends its life among the leaves and branches of tall weeds and shrubs. It is the ivory climbing cricket, *Acanthus niveus*, Serv. The male is ivory white, with very broad, transparent wing-covers, crossed by from three to five oblique raised lines. In the female the wing-covers are longer and narrower, and of a pale green colour. The antennae and legs are long and slender, the insect not being so stoutly built as the ground crickets. The shrilling of this species is more sustained than that of *Gryllus*, the notes running together like the roll of a drum, swelling and decreasing alternately. They commence shrilling about the first of August, and continue until the frosts of October put an end to their existence. This is a very troublesome insect to the fruit grower, attacking the peach, plum and other trees, being particularly injurious to the grape and raspberry. When about to deposit her eggs, the female settles herself on a grape stem or raspberry cane, and pierces it with her ovipositor, laying a long, narrow, yellow egg in the opening thus made, repeating the operation until from four to fifteen have been deposited.

The cane thus attacked often withers above the punctured part, or is so much weakened as to be easily broken off by the wind or by the weight of the leaves in spring, the result in either case being the loss of the fruit. Late in fall or early in spring search should be made for the punctured canes, which should be cut away and burned. The insects themselves may be killed by jarring them from the plants and crushing them under foot. Fences and waste-corners should be kept clean and free from wild vines and briars, such places being prolific breeding grounds of this and various other insect pests.

FAMILY 2.—LOCUSTIDÆ, (GRASSHOPPERS.)

The term Grasshopper is now generally restricted to certain orthopterous insects with very long, slender legs and antennae, mostly of a grass or leaf-green colour. In the winged species the wing-covers slope downwards at the sides of the body and overlap a little on the back near the thorax. The ovipositor is generally long and curved like a

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